Appl. No. 09/833,543

Amdt. dated January 11, 2006

Reply to Final Office Action of July 11, 2005 and Advisory Action mailed 13 December 2005

Amendments to the Specification:

Please replace the paragraph beginning at page 5, line 11 with the following amended paragraph:

The invention will be generally described with reference to Figure 1. A symbol stream d(t) to be transmitted during a frame in the communication system is fed into a space-time encoder. The space-time encoder divides the symbol stream d(t) into two symbol streams, $d_1(t)$ and $d_2(t)$, each containing half the symbols. The transmission frame is also divided into two blocks. The space-time encoder provides input to two radio transmitters 13 and 14 connected to two antennas 11 and 12. In the transmitters 13 and 14, the digital signals from the space-time encoder are converted to analog signals via a digital-to-analog an analog to digital converter and upconverted to radio frequency. In one embodiment of the invention the space-time encoder transmits symbol stream $d_1(t)$ from antenna 11 during a first block of the transmission frame and transmits symbol stream $d_2(t)$ from the antenna 12. In a second block of the transmission frame, the space-time encoder transmits symbol stream $d_2(t)$ time-reversed, complex conjugated and negated from antenna 11 and symbol stream $d_1(t)$ is transmitted time-reversed and complex conjugated from antenna 12.

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